

Random Activation of Gene Expression (RAGE)

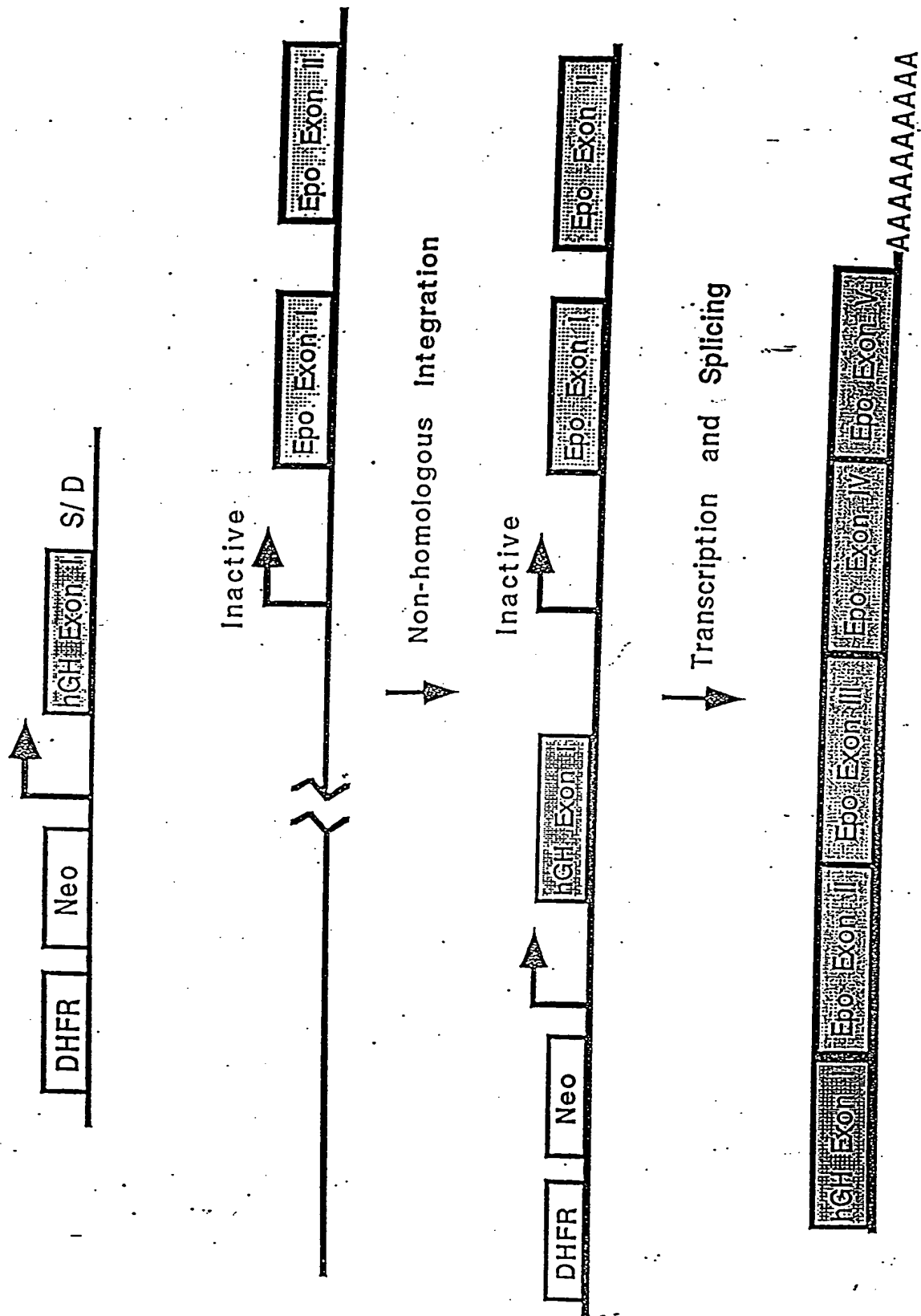


Figure 1

Activation Constructs without Translation Start Codons

Construct #



Untranslated

S/D Splice Donor

Fig. 2

Construct #

6692ED 0289260

3-5



6-8



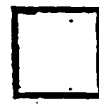
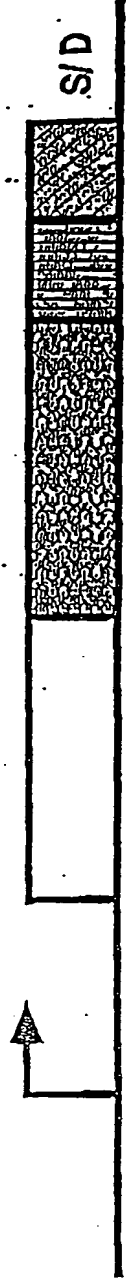
9-11



12-14



15-17



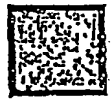
Untranslated



Secretion Signal



Protease Cleavage Site



Translated



Epitope Tag

S/D Splice Donor

Fig. 3

009200 0239260

pRIG-1

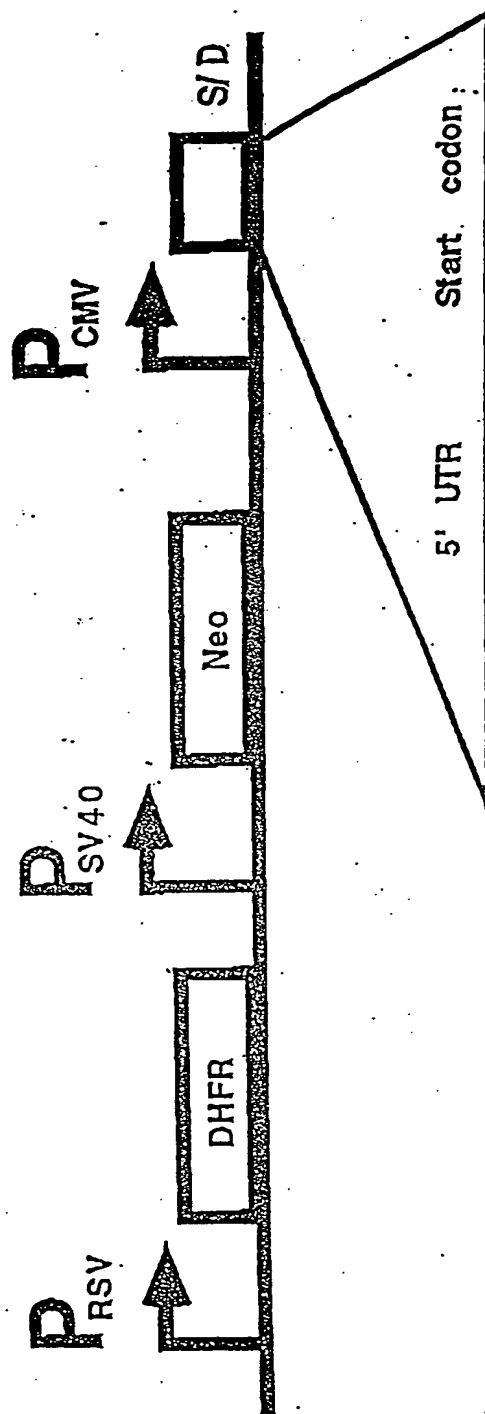


FIG. 4

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
 AATATTGGCTATTGGCCATTGCATA
 CGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCG
 CCATGTTGGCATTGATTATTGACT
 AGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGT
 TCCGCGTTACATAACTTACGGTAAA
 TGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTTGACGTCAATAATGACG
 TATGTTCCCATAGTAACGCCAATAG
 GGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGC
 AGTACATCAAGTGTATCATATGCCA
 AGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCC
 AGTACATGACCTTACGGGACTTTCC
 TACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTT
 GGCAGTACACCAATGGGCGTGGAT
 AGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGAG
 TTTGTTTTGGCACCAAAATCAACGG
 GACTTTCCAAAATGTCTGAACAACTGCGATCGCCCGCCCCGTTGACGCAAATGGG
 CGGTAGGCGTGTACGGTGGGAGGTC
 TATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCGG
 TAGTTTATCACAGTTAAATTGCTAA
 CGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTT
 AATTAAGTCCACCAGTCTCACTTCA
 GTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGAA
 TCAAAAGAGGAAACCAACCCCTAA
 GATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCTT
 CCAAAGGTGCAGTCTCCAAAGAGA
 TTACGAATGCCTTGGAACCTGGGGTGCCTTGGGTGAGGACATCAACTTGGACAT
 TCCTAGTTTTCAAATGAGTGATGAT
 ATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTCA
 GAAAAGAGAAAGAGACTTTCAAGGA
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 TATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGAA
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 AAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGAA
 CTGACCCCGAATTAAACCTGTATCA
 AGATGGGAAACATCTAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCACC
 AGCCTGAGTGCAAAATTCAAGTGCA
 CAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTCGAGCCTGTCAGCTGTCCAG
 AGAAAGGGATCCAGGTGAGTAGGGCC
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 GGAGACCAATAGAACTGGGCTTGT
 CGAGACAGAGAAGACTCTTGCCTTTCTGATAGGCACCTATTGGTCTTACGCGGCC
 GCGAATTCCAAGCTTGAGTATTCTA
 TCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCTGTGTGAA
 ATTGTTATCCGCTCACAATTCCACA
 CAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAG
 CTAAGTCACTAATTGCGTTGCGCGATGCTTCCATTTTGTGAGGGTTAATGC-

Figure 5A

TTCGAGAAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACAAGAAT
 GCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAA
 CCATTATAAGCTGCAATAAACA
 AGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATGTGG
 GAGGTTTTTTTAAAGCAAGTAAAACC
 TCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGAAT
 GGACGCGCCCTGTAGCGGCGCATTA
 AGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCC
 TAGCGCCCGCTCCTTTCGCTTTCCTC
 CCTTCCTTCTCGCCACGTTTCGCGGGCTTTCCCGTCAAGCTCTAAATCGGGGGC
 TCCCTTTAGGGTTCCGATTTAGTGC
 TTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGG
 CCATCGCCCTGATAGACGGTTTTTC
 GCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTGG
 AACAACTCAACCCTATCTCGGTC
 TATTCTTTTGATTTATAAGGGATTTTGCCGATTTTCGGCCTATTGGTTAAAAAATGA
 GCTGATTTAACAAAAATTTAACGC
 GAATTTTAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTCTGAGGCGG
 AAAGAACCAGCTGTGGAATGTGTGT
 CAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGC
 ATGCATCTCAATTAGTCAGCAACCAG
 GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCT
 CAATTAGTCAGCAACCATAGTCCCGC
 CCTAACTCCGCCCATCCCGCCCTAACTCCGCCCAGTTCCGCCCATTTCTCCGCC
 CCATGGCTGACTAATTTTTTTTATT
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 GGCTTTTTTGGAGGCCTAGGCTTTTG
 CAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCA
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 ACAATCGGCTGCTCTGATGCCGCCG
 TGTTCCGGCTGTCAGCGCAGGGGCGCCCGTTCTTTTGTCAAGACCGACCTGTC
 CGGTGCCCTGAATGAACTGCAGGAC
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 GCTCCTGCCGAGAAAGTATCCATCA
 TGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGA
 CCACCAAGCGAAACATCGCATCGAG
 CGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
 GAGCATCAGGGGCTCGCGCCAGCCGA
 ACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGAC
 CCATGGCGATGCCTGCTTGCCGAATA
 TCATGGTGGAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGT
 GGCGGACCGCTATCAGGACATAGCG
 TTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCC
 TCGTGCTTTACGGTATCGCCGCTCC
 CGATTTCGACGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGA
 CTCTGGGGTTTCGAAATGACCGACCAAGCGACGCCCAACCTGCCATCACGATGGC-

Figure 5B

CGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAAGA
 TCCGCGTA-
 TGGTGCACCTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGAC
 ACCCGCCAACAC
 CCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGC
 TGTGACCGTCTCCGGGAGCTGCATG
 TGTGAGAGGTTTTTACCCTCATCACCGAAACGCGCGAGACGAAAGGGCCTCGTGA
 TACGCCTATTTTTATAGGTTAATGT
 CATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGC
 GGAACCCCTATTTGTTTATTTTTCT
 AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCA
 ATAATATTGAAAAAGGAAGAGTATG
 AGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCC
 TGTTTTTGCTCACCCAGAAACGCT
 GGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATCGA
 ACTGGATCTCAACAGCGGTAAGATCC
 TTGAGAGTTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCT
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 TGGTTGAGTACTCACCAGTCACAGA
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 ATGAGTGATAACACTGCGGCCAACT
 TACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACAT
 GGGGGATCATGTAACCTCGCCTTGAT
 CGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACG
 ATGCCTGTAGCAATGGCAACAACGTT
 GCGCAAACCTATTAACCTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATA
 GACTGGATGGAGGCGGATAAAGTTG
 CAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATC
 TGGAGCCGGTGAGCGTGGGTCTCGC
 GGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCT
 ACACGACGGGGAGTCAGGCAACTAT
 GGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGG
 TAACTGTCAGACCAAGTTTACTCAT
 ATATACTTTAGATTGATTTAAACTTCATTTTTAATTTAAAGGATCTAGGTGAAG
 ATCCTTTTTGATAATCTCATGACC
 AAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGA
 TCAAAGGATCTTCTTGAGATCCTTT
 TTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTG
 GTTTGTTTGCCGGATCAAGAGCTAC
 CAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGT
 CCTTCTAGTGTAGCCGTAGTTAGGC
 CACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGT
 TACCAGTGGCTGCTGCCAGTGGCGA
 TAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAG
 CGGTCGGGCTGAACGGGGGGTTCTG
 GCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGC
 GTGAGCTATGAGAAAGCGCCACGCTT
 CCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGG-

Figure 5C

AGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCTGGTATCTTTATAGTCCTGTC
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGG
GGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTACGGTTCCTGGCCTT
TTGCTGGCCTTTTGCTCACATGGCT
CGAC3'

Figure 5D

009276220 0289260

5'AGATCTTCAATATTGGCCATTAGCCATATTATTTCATTGGTTATATAGCATAAATC
 AATATTGGCTATTGGCCATTGCAT
 ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
 GCCATGTTGGCATTGATTATTGAC
 TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
 TTCCGCGTTACATAACTTACGGTAA
 ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATGACGTCAATAATGAC
 GTATGTTCCCATAGTAACGCCAATA
 GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
 CAGTACATCAAGTGTATCATATGCC
 AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
 CAGTACATGACCTTACGGGACTTTC
 CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
 TTGGCAGTACACCAATGGGCGTGGA
 TAGCGGTTTGACTCACGGGGATTTCGAAGTCTCCACCCCATGACGTCAATGGGA
 GTTTGTTTTTGGCACCAAAATCAACG
 GGACTTTCCAAAATGTCGTAACAACCTGCGATCGCCCGCCCCGTTGACGCAAATGG
 GCGGTAGGCGTGTACGGTGGGAGGT
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 GTAGTTTATCACAGTTAAATTGCTA
 ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT
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 TATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTC
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 CAGCCTGAGTGCAAAATTCAAGTGC
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 AATTGTTATCCGCTCACAATTCCA
 CACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTG
 AGCTAACTCACATTAATTGCGTTGCG
 CGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATT
 GATGAGTTTGGACAAACCACAACAAGAATGCAGTGAAAAAATGCTTTATTGT-

Figure 6A

GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA
CAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATGT
GGGAGGTTTTTTTAAAGCAAGTAAAA
CCTCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGA
ATGGACGCGCCCTGTAGCGGCGCAT
TAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
CCTAGCGCCCGCTCCTTTTCGCTTTCT
TCCCTTCCTTTCTCGCCACGTTTCGCGGGCTTTCCCGTCAAGCTCTAAATCGGGG
GCTCCCTTTAGGGTTCCGATTTAGT
GCTTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTCACGTAGTG
GGCCATCGCCCTGATAGACGGTTTT
TCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTG
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TCTATTCTTTTGATTTATAAGGGATTTTGCCGATTTTCGGCCTATTGGTTAAAAAAT
GAGCTGATTTAACAATAATTTAAC
GCGAATTTTAACAATAATTTAACGCTTACAATTTTCGCCTGTGTACCTTCTGAGGC
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GCCCCTAACCTCGCCCATCCCGCCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCG
CCCCATGGCTGACTAATTTTTTTTA
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CATGATTGAACAAGATGGATTGCAC
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CGTGTTCCGGCTGTGAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTG
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CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCG
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ACCCATGGCGATGCCTGCTTGCCGAA
TATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGT
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CCCGATTTCGACGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGG
GACTCTGGGGTTTCAAATGACCGAC
CAAGCGACGCCCAAGCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTCA
TTACATCTGTGTGTGGTTTTTTGT
GTGAAGATCCGCGTATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGT
TAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCT-

Figure 6B

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
 AATATTGGCTATTGGCCATTGCAT
 ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
 GCCATGTTGGCATTGATTATTGAC
 TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
 TTCCGCGTTACATAACTTACGGTAA
 ATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGAC
 GTATGTTCCCATAGTAACGCCAATA
 GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
 CAGTACATCAAGTGTATCATATGCC
 AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
 CAGTACATGACCTTACGGGACTTTC
 CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
 TTGGCAGTACACCAATGGGCGTGGA
 TAGCGGTTTGACTCACGGGGATTTCGAAGTCTCCACCCCATTGACGTCAATGGGA
 GTTTGTTTTGGCACCAAAATCAACG
 GGACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAATGG
 GCGGTAGGCGTGTACGGTGGGAGGT
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 AAATTGTTATCCGCTCACAATTCC
 ACACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGT
 GAGCTAACTCACATTAATTGCGTTGC
 GCGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACAT
 TGATGAGTTTGGACAAACCACAACA AGAATGCAGTGAAAAAAATGC-

Figure 7A

TTTATTGTGAAATTTGTGATG
CTATTGCTTTATTTGTAACCAATTATAAGCTGCAATAA
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TGGGAGGTTTTTTAAAGCAAGTAAA
ACCTCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCG
AATGGACGCGCCCTGTAGCGGCGCA
TTAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
CCTAGCGCCCGCTCCTTTCGCTTTC
TTCCCTTCCTTTCTCGCCACGTTTCGCCGGCTTTCCCGTCAAGCTCTAAATCGGGG
GCTCCCTTTAGGGTTCCGATTTAG
TGCTTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTACGTAAGT
GGGCCATCGCCCTGATAGACGGTTT
TTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAACT
GGAACAACACTCAACCCTATCTCG
GTCTATTCTTTTGATTTATAAGGGATTTTGCCGATTTCCGGCCTATTGGTTAAAAAA
TGAGCTGATTTAACA AAAAATTTAA
CGCGAATTTTAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTCTGAGG
CGGAAAGAACCAGCTGTGGAATGTG
TGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAA
AGCATGCATCTCAATTAGTCAGCAAC
CAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCA
TCTCAATTAGTCAGCAACCATAGTCC
CGCCCCTAACTCCGCCCATCCGCCCCCTAACTCCGCCCAGTTCCGCCCATTCTCC
GCCCCATGGCTGACTAATTTTTTTTT
ATTTATGCAGAGGCCGAGGCCGCTCGGCCCTCTGAGCTATTCCAGAAGTAGTGAG
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CAGACAATCGGCTGCTCTGATGCCG
CCGTGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCT
GTCCGGTGCCCTGAATGAACTGCAG
GACGAGGCAGCGCGGCTATCGTGCTGGCCACGACGGGCGTTCCCTTGCGCAGCT
GTGCTCGACGTTGTCACTGAAGCGGG
AAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCAC
CTTGCTCCTGCCGAGAAAGTATCCA
TCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCAT
CGACCACCAAGCGAAACATCGCATC
GAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGAC
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CGAACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGT
GACCCATGGCGATGCCTGCTTGCCGA
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TGTGGCGGACCGCTATCAGGACATA
GCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCT
TCCTCGTGCTTTACGGTATCGCCGC
TCCCGATTTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCG
GGACTCTGGGGTTTCGAAATGACCGA
CCAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAAATATCTTTATTTTC
ATTACATCTGTGTGTTGGTTTTTTGTGTGAAGATCCGCGTATGGTGCACTCTC-

Figure 7B

AGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAA
 CACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACA
 AGCTGTGACCGTCTCCGGGAGCTGC
 ATGTGTCAGAGGTTTTACCGTTCATCACCGAAACGCGCGAGACGAAAGGGCCTCG
 TGATACGCCTATTTTTATAGGTAA
 TGTGATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTG
 CGCGGAACCCCTATTTGTTTATTTT
 TCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCT
 TCAATAATATTGAAAAAGGAAGAGT
 ATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCT
 TCCTGTTTTTGCTCACCCAGAAAC
 GCTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACAT
 CGAACTGGATCTCAACAGCGGTAAGA
 TCCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGT
 TCTGCTATGTGGCGCGGTATTATCC
 CGTATTGACGCCGGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATG
 ACTTGGTTGAGTACTCACCGATCAC
 AGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATA
 ACCATGAGTGATAACACTGCGGCCA
 ACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGACAA
 CATGGGGGATCATGTAACTCGCCTT
 GATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACC
 ACGATGCCTGTAGCAATGGCAACAAC
 GTTGCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTA
 ATAGACTGGATGGAGGCGGATAAAG
 TTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAA
 ATCTGGAGCCGGTGAGCGTGGGTCT
 CGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTA
 TCTACACGACGGGGAGTCAGGCAAC
 TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCAT
 TGGTAACTGTCAGACCAAGTTTACT
 CATATATACTTTAGATTGATTTAAACTTCATTTTTTAATTTAAAAGGATCTAGGTG
 AAGATCCTTTTTGATAATCTCATG
 ACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAA
 AGATCAAAGGATCTTCTTGAGATCC
 TTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCG
 GTGGTTTGTGTTGCCGGATCAAGAGC
 TACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATAC
 TGTCCCTTCTAGTGTAGCCGTAGTTA
 GGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCC
 TGTACCAGTGGCTGCTGCCAGTGG
 CGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCG
 CAGCGGTGCGGGCTGAACGGGGGGTT
 CGTGACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTAC
 AGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGT
 ATCCGGTAAGCGGCAGGGTTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGG
 GGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAG
 CGTCGATTTTTGTGATGCTCGTCAG
 GGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGG
 CCTTTTGCTGGCCTTTTGCTCACATGGCTCGAC3'

Figure 7C

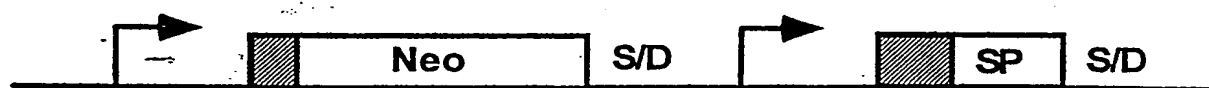


FIGURE 8

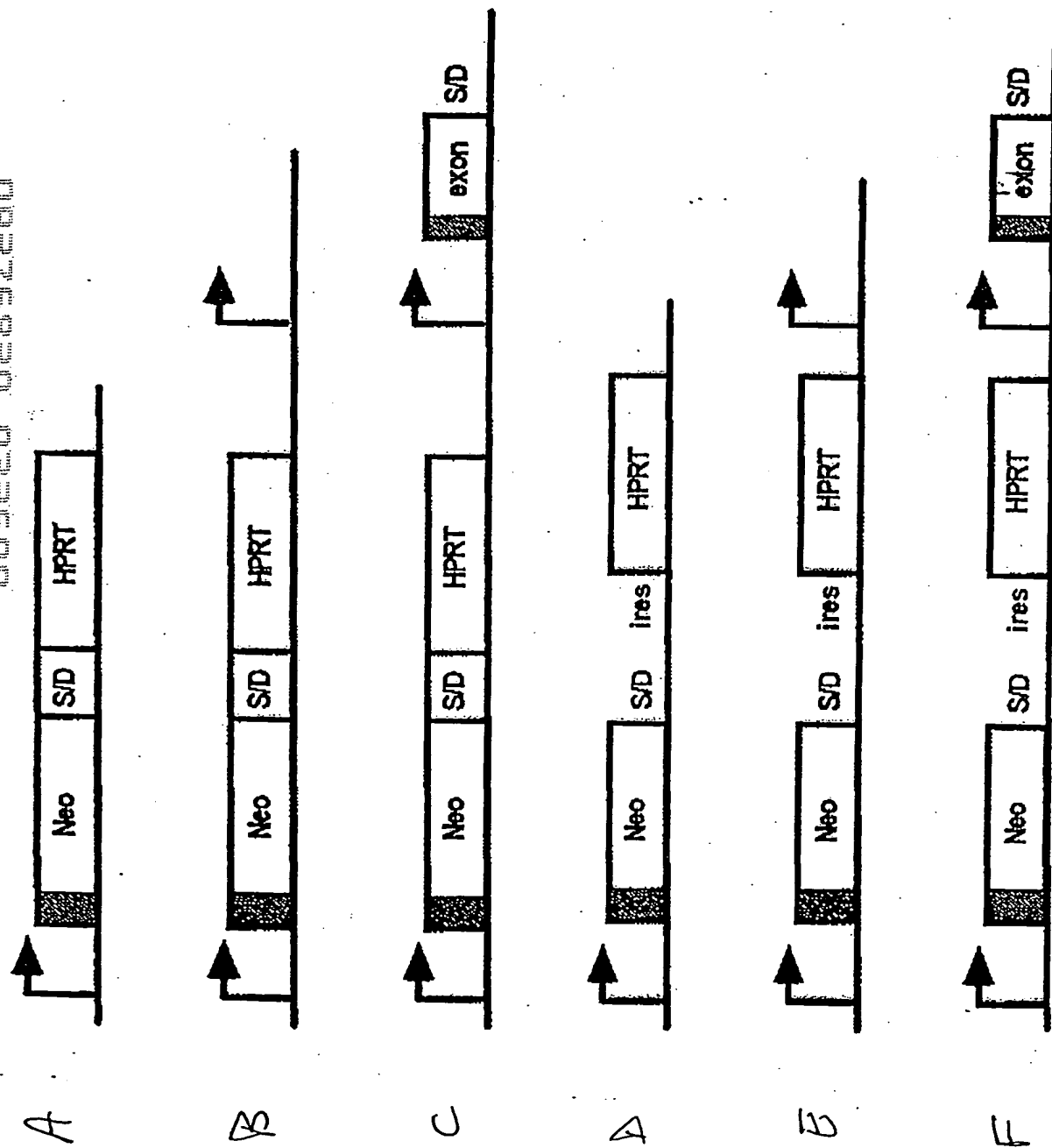


FIGURE 9

FIGURE 10

A



B

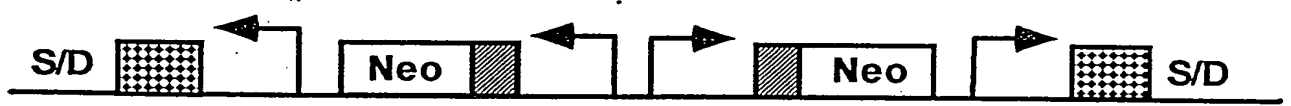
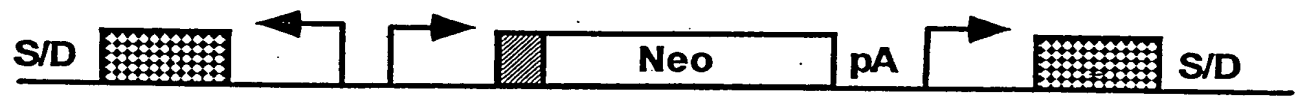


FIGURE 11

00075820-032599

A



B



C



D



E



F



G



FIGURE 12

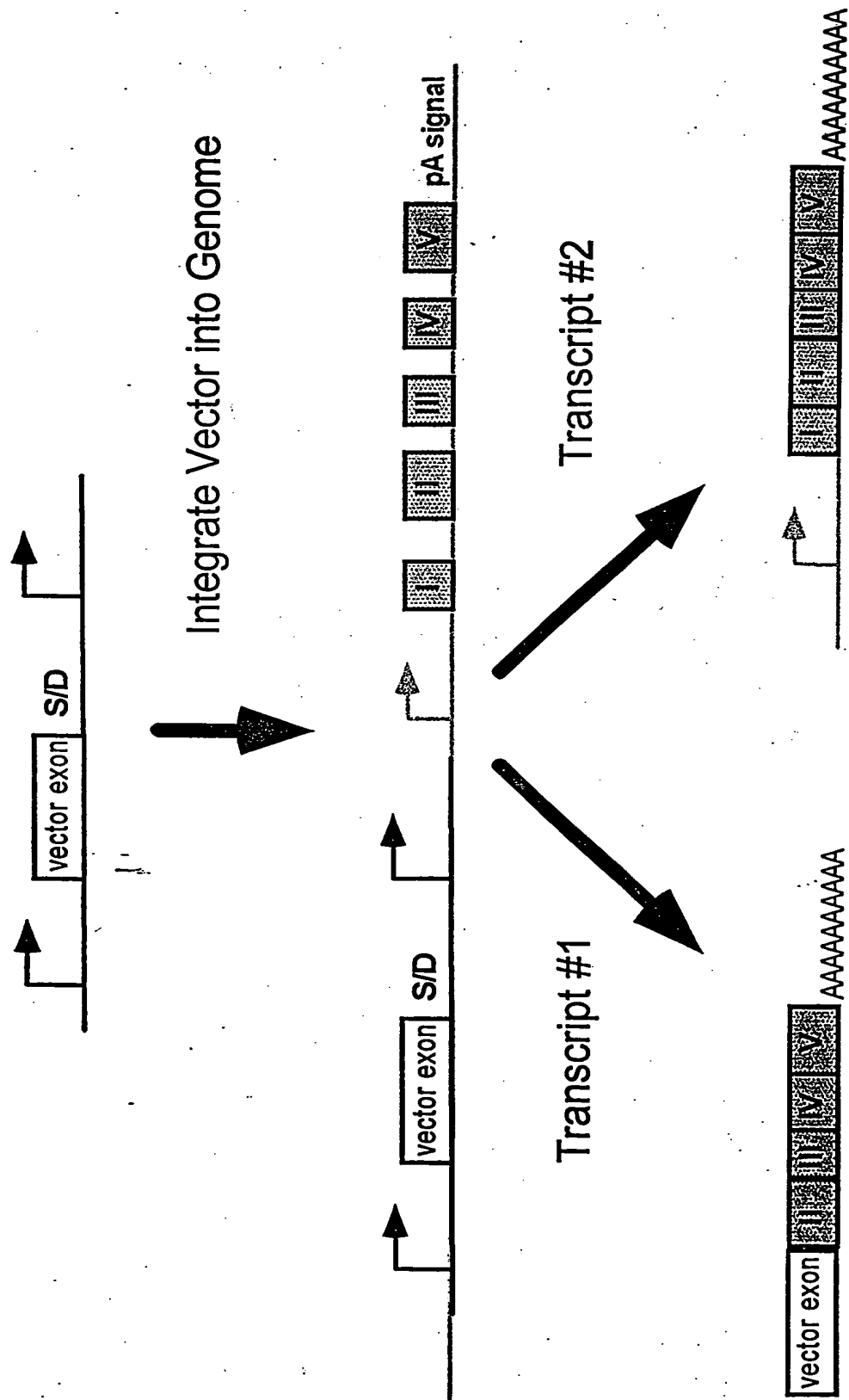


FIGURE 13

0027360-00000000

AGATCTTCAATATTGGCCATTAGCCATATTATTCAATTGGTTATATAGCATAAAATCAATATTGG
CTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCA
ATATGACCGCCATGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCA
TTAGTTCATAGCCCATATATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCTGGC
TGACCGCCCAACGACCCCCGCCATTGACGTCAATTAATGACGTATGTTCCCATAGTAACGCCA
ATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTA
CATCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCCGCC
TGGCATTATGCCCAGTACATGACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTA
GTCATCGCTATTACCATGGTGTATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTT
GACTCACGGGGATTTCCTAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTGTGTTTGGCACCAA
AATCAACGGGACTTTCCAAAATGTCGTAACAACCTGCGATCGCCCGCCCGTTGACGCAAATG
GGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTGTAGTGAACCGTCAGAT
CACTAGAAGCTTTATTGCGGTAGTTTATCACAGTTAAATTGCTAACGCAGTCAGTGCTTCTGA
CACAAAGTCTCGAACTTAAGCTGCAGTGAATCTCTTAATccaccatggctacaggtgagtactcgGATCTA
GCGCTATATGCGTTGATGCAATTTCTATGCGCACCCGTTCTCGGAGCACTGTCCGACCCGCTTT
GGCCGCGCCCAAGTCTGCTCGCTTCTGCTACTTGGAGCCACTATCGACTACGCGATCATGGCG
ACCACACCCGTCCTGTGGATCCTCTACGCGGACGCATCGTGGCCGGCATCACCGGCGCCACA
GGTGCAGTTTGTGGCGCTATATCGCCGACATCACCGATGGGGAAGATCGGGCTCGGCACTTC
GGGCTCATGAGCGCTTGTGTTTGGGCTCTCTTAAGGTAGCAGATCCTTGCTAGAGTCGACCAATT
CTCATGTTTGTACAGCTTATCATCGCAGATCCTGAGCTTGTATGGTGCACCTCTCAGTACAATCT
GCTCTGCTGCCGCATAGTTAAGCCAGTATCTGCTCCCTGCTTGTGTGTTGGAGGTGCTGAGT
AGTGCGCGAGCAAAATTTAAGCTACAACAAGGCAAGGCTTGACCGACAATTGCATGAAGAAT
CTGCTTAGGGTTAGGCGTTTTGCGCTGCTTCGCGATGTACGGGCCAGATATACGCGTATCTGA
GGGACTAGGGTGTGTTTAGGCGCCAGCGGGGCTTCGGTTGTACGCGGTTAGGAGTCCCTC
AGGATATAGTAGTTTCGCTTTTGCATAGGGAGGGGAAATGTAGTCTTATGCAATACACTTGT
AGTCTTGCAACATGGTAACGATGAGTTAGCAACATGCCTTACAAGGAGAGAAAAAGCACCGT
GCATGCCGATTGGTGGAAGTAAGGTGGTACGATCGTGCCTTATTAGGAAGGCAACAGACAGG
TCTGACATGGATTGGACGAACCACTGAATTCGCGATTGCAGAGATAATTGTATTTAAGTGCCT
AGCTCGATACAATAAACGCCATTTGACCATTACCAATTGGTGTGCACCTCCAAGCTGGGTA
CCAGCTGCTAGCCTCGAGACGCGTGATTTCTTGAAGCTTgtcatggttggtcgtaactgcatgctgctgtgc
ccagaacatgggcatggcaagaacggggacctgcccggcaccgctcaggaaatgaattcagatattccagagaatgaccacaacctcttcagtaga
aggtaaacagaatctgggtgattatgggtaagaagacctggttccattcctgagaagaatcgaccttaagggtagaattaattagttctcagcagagaa
ctcaaggaaacctccacaaggagctcattttctccagaagctcagatgatgcttaaaacttactgaacaaccagaattagcaataaagtagacatggtct
ggatagttggtggcagttctgtttataaggaagccatgaatcacccaggccatcttaaaactatttggacaaggatcatgcaagacttgaaagtacacggtt
ttccagaaattgatttgagaaataaaacttctgccagaatacccggtgttctctctgatgtccaggaggagaaaggcattaaagtagaaatttgagata
tgagaagaatgattaatCGATCTTAAGTTTAATCTTTCCCGGGGGTACCGTCGACTGCGGCCGCGAATTC
CAAGCTTGAGTATTCTATCGTGTACCTAAATAAATTGGCGTAATCATGGTCATATCTGTTTCC
TGTGTGAAATTGTTATCCGCTCACAAATCCACACAACATAACGAGCCGGAAGCATAAAGTGTA
AAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCGATGCTTCCATTT
TGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATTGATGAGTTTGGACAAACCACA
ACAAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTA
ACCATTAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCAATTTTATGTTTCAGGTT
CAGGGGGAGATGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTAAATCCG
ATAAGGATCGATTCCGGAGCCTGAATGGCGAATGGACGCGCCCTGTAGCGGCGCATTAAGCG
CGGCGGGTGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCCTAGCGCCCGCTCC
TTTCGCTTTCTTCCCTTCTCGCCACGTTTCGCGGCTTTCCCGTCAAGCTCTAAATCGG
GGGCTCCCTTTAGGGTTCCGATTTAGTCTTTACGGCACCTCGACCCCAAAAACTTGATTAG
GGTGATGGTTACGTAAGTGGGCCATCGCCCTGATAGACGGTTTTTCGCCCTTTGACGTTGGAG
TCCACGTTCTTTAATAGTGGACTCTTGTTCCTAAATGGAACAACACTCAACCCTATCTCGGTC
TATTCTTTTGAATTTATAAGGGATTTTGGCGATTTTCGGCTATTGGTTAAAAAATGAGCTGATTT
AACAAAAATTTAACGCGAATTTTAAACAAAATATTAACGCTTACAATTTTCGCTGTGTACCTTC
TGAGGCGGAAAGAACCAGCTGTGGAATGTGTGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTC
CCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTGGAAAGT
CCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCATA-

FIGURE 14A

669220-0229220

GTCCCGCCCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCCCC
ATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCC
AGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTTGATTCTTCTGACA
CAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCACGCAGGTT
CTCCGGCCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAACAGACAATCGGCTGC
TCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGAC
CTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGAC
GGGCGTTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATT
GGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCAT
CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCATTGACCACCA
AGCGAAACATCGCATCGAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCAGGATG
ATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCCGCCAGGCTCAAGGCGCGC
ATGCCCGACGGCGAGGATCTCGTCTGAGCCCATGGCGATGCCTGCTTGCCGAATATCATGGTG
GAAAATGGCCGCTTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAG
GACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGCGGCGCAATGGGCTGACCGCTTC
CTCGTGCTTTACGGTATCGCCGCTCCCGATTTCGACGCGCATCGCCTTCTATCGCCTTCTTGACG
AGTTCTTCTGAGCGGGACTCTGGGGTTCGAAATGACCGACCAAGCGACGCCCAACCTGCCAT
CACGATGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGGAAG
ATCCGCGTATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGA
CACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGCTGCTCCCGGCATCCGCTTACAGA
CAAGCTGTGACCGTCTCCGGGAGCTGCATGTGTGAGAGGTTTTACCCTCATCACCGAAACGC
GCGAGACGAAAGGGCCTCGTGATACGCCTATTTTTATAGGTTAATGTCATGATAATAATGGTT
TCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTTCT
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCTGATAAATGCTTCAATAATATT
GAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTGCGCCCTTATTCCCTTTTTTGCGGCAT
TTTGCTTCTGTTTTTGTCTACCCAGAAACGCTGGTGAAAGTAAAGATGCTGAAGATCAGT
TGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTC
GCCCCGAAGAACGTTTTTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTAT
CCCGTATTGACGCCGGGCAAGAGCACTCGGTCCGGCATACTATTCTCAGAATGACTTGG
TTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGC
AGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCGGAGG
ACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACCTCGCCTTGATCGTTG
GGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACGATGCCTGTAGCAA
TGGCAACAACGTTGCGCAAACTATTA ACTGGCGAACTACTTACTCTAGCTTCCCGCAACAA
TAATAGACTGGATGGAGGCGGATAAAGTTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCT
GGCTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCA
CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAAC
TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAAC
TGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAACTTCATTTTTTAATTTAAAG
GATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTCTGTT
CCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCG
CGTAATCTGCTGCTTGCAAAACAAAAAACCACCGCTACCAGCGGTGGTTTGTGTTGCCGGATCA
AGAGCTACCAACTCTTTTTCCGAAGGTAAC TGGCTTCAGCAGAGCGCAGATACCAATACTGT
CCTTCTAGTG TAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCT
CGCTCTGCTAATCCTGTTACCAAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGT
GGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGCGGGCTGAACGGGGGGTTCGTGCA
CACAGCCCAGCTTGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGA
GAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCG
GAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCTGTG
GGGTTTCCGCCACCTCTGACTTGAGCGTGCATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTA
TGGA AAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCAC
ATGGCTCGAC

FIGURE 14B

CTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTA
TCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTGAC
CACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCA
GGATGATCTGGACGAAGAGCATCAGGGGGCTCGCGCCAGCCGAACTGTTGCCAGGCTCAAGG
CGCGCATGCCCCGACGGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCA
TGGTGGA AAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCT
ATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGAC
CGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTGCGAGCGCATCGCCTTCTATCGCCTTC
TTGACGAGGccaTTCTgatggaggttagCGGCCGCTAACCTGGTTGCTGACTAATTGAGATGCATGCTTT
GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACA
GCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTAAAA
TTCGCGTTAAATTTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATC
CCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGGAACAAGAG
TCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATG
GCCCCAC

FIGURE 15B

00276820 0289260

09276820 09392260

GTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCGAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGA
TCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGA ACTGTTGCCAGGCTCA
AGGCGCGCATGCCCGACGGCGAGGATCTCGTCTGACCCATGGCGATGCTGCTTGCCGAAT
ATCATGGTGGAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGAC
CGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGC
TGACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTTCGCAGCGCATCGCCTTCTATCGC
CTTCTTGACGAGGccaTTCTgctggatggCTacAGGTcgagccctggcgtcgtgattagtgatgatgaaccagggttatgacctgattta
tttgcatacctaatacattatgctgaggatttggaaagggtgtttatctcatggactaattatggacaggactgaacgtcttgctcgagatgtgatgaaggag
atgggaggccatcacatttagccctctgtgtcaaggggggtataaattcttggctgacctgctggattacatcaaagcactgaatagaaatagtata
gatccattcctatgactgtagattttatcagactgaagagctattgtaatgaccagtcacaggggacataaaaagtaattggaggagatgatctctcaactta
actggaagaatgtctgattgtggaagataaattgacactggcaaaacaatgcagactttgcttcttggtcaggcagtataatccaaagatggtcaagg
tcgcaagcttgctggtgaaaaggacccacgaagtgttgatataagccagactttgttgattgaaattccagacaagttgttaggatatgccttga
ctataatgaatactcagggaattgaatcatgtttgtgcttagtgaaaactggaaaagcaaaatacaagcctaaGCGGCCGCTAACCTGGT
TGCTGACTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCC
ACACCCTAACTGACACACATTCCACAGCTGGTTCCTTCCGCCTCAGAAGGTACACAGGCGAAA
TTGTAAGCGTTAATATTTTGTAAAAATTCGCGTTAAATTTTGTAAATCAGCTCATTTTAA
CCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAAAGAATAGACCGAGATAGGGTTGA
GTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGG
CGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 16B

00276820.0289260

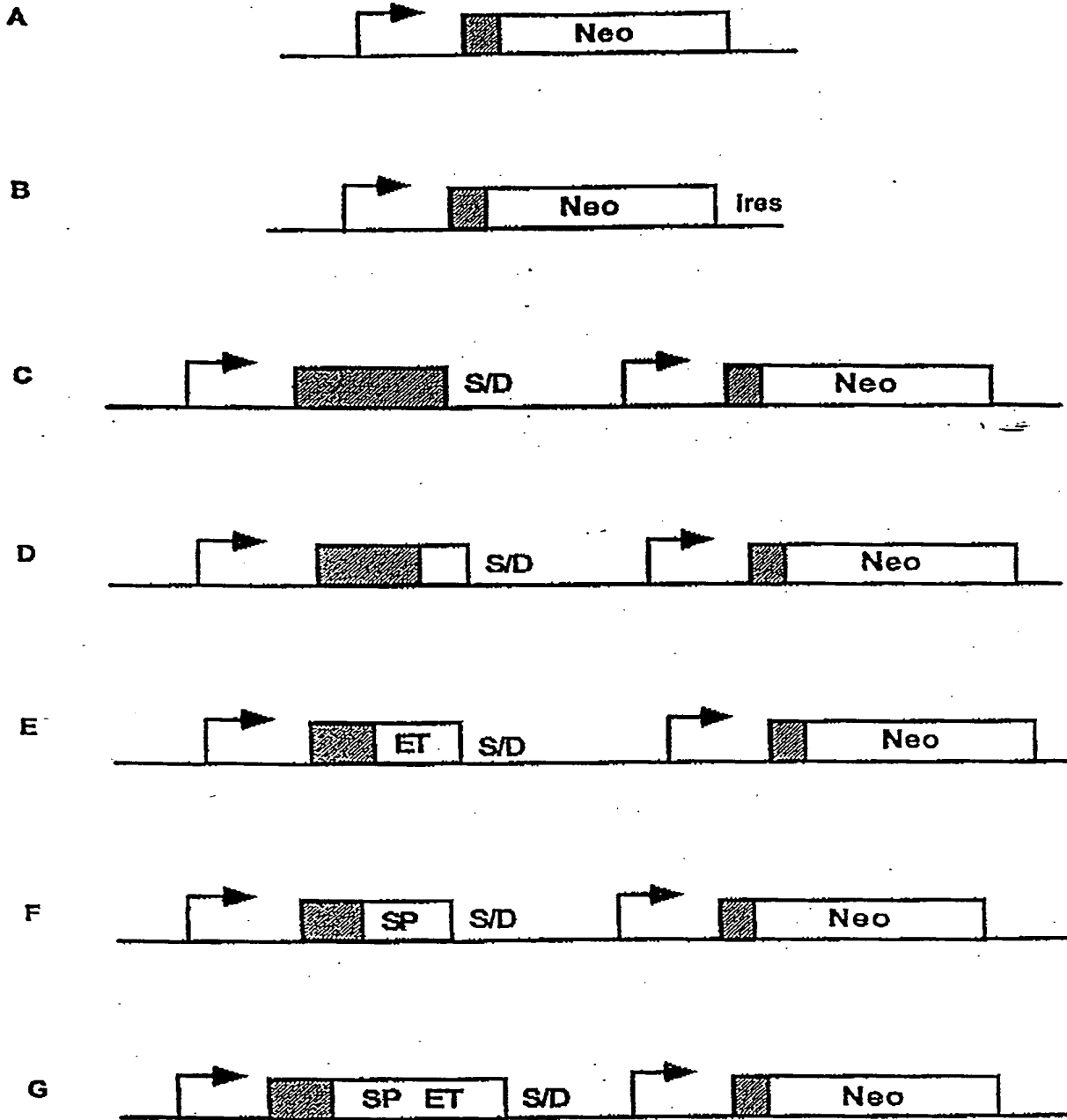


Figure 17

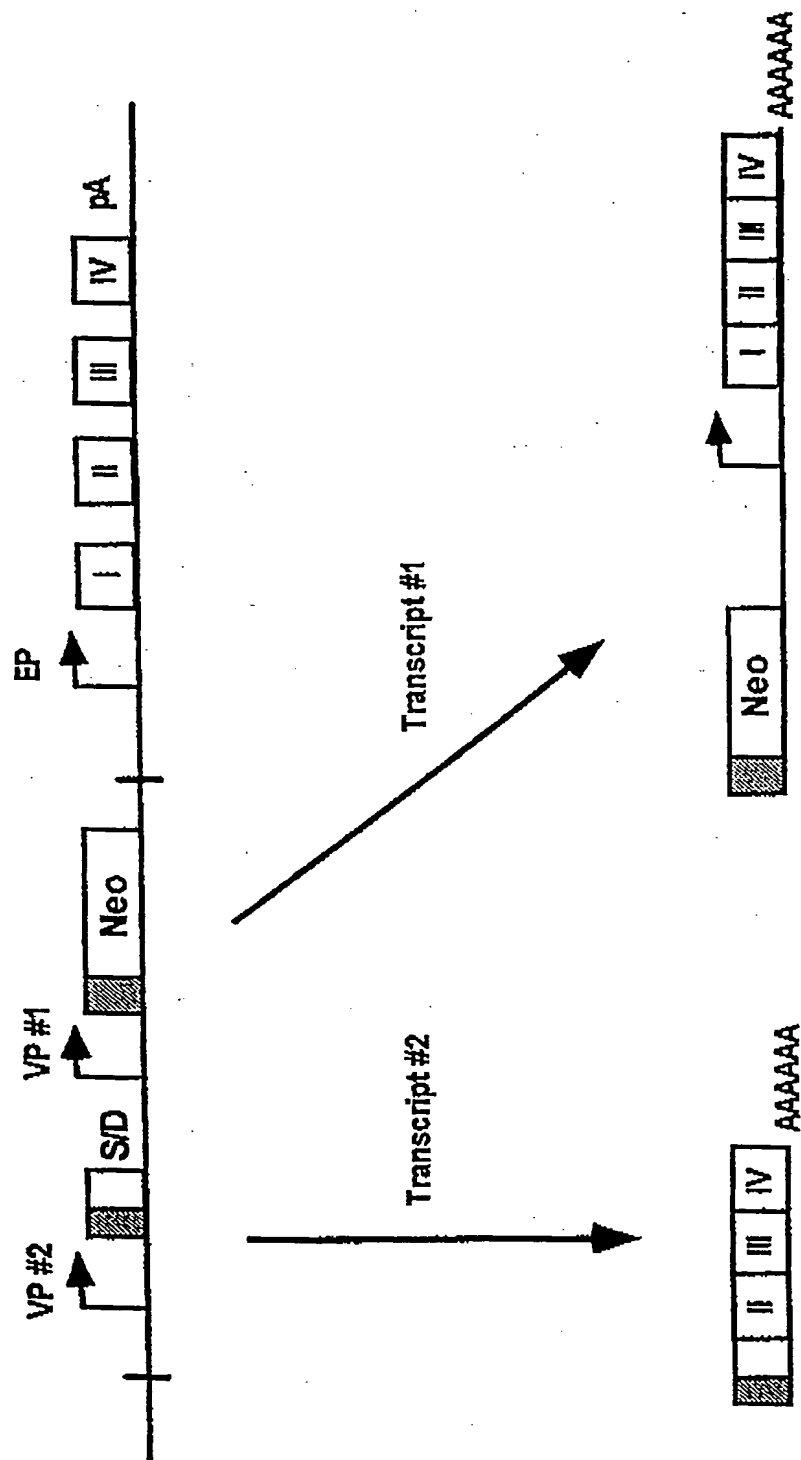


Figure 18



Figure 19

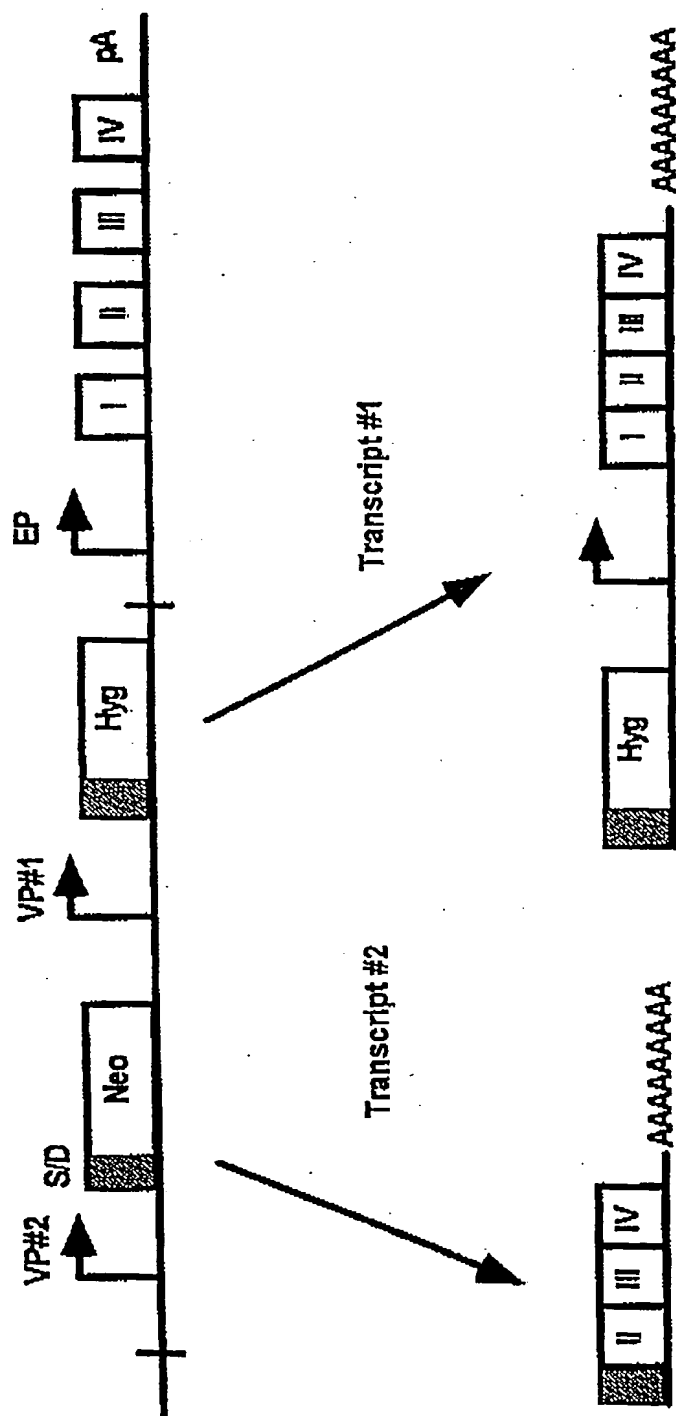


Figure 20A

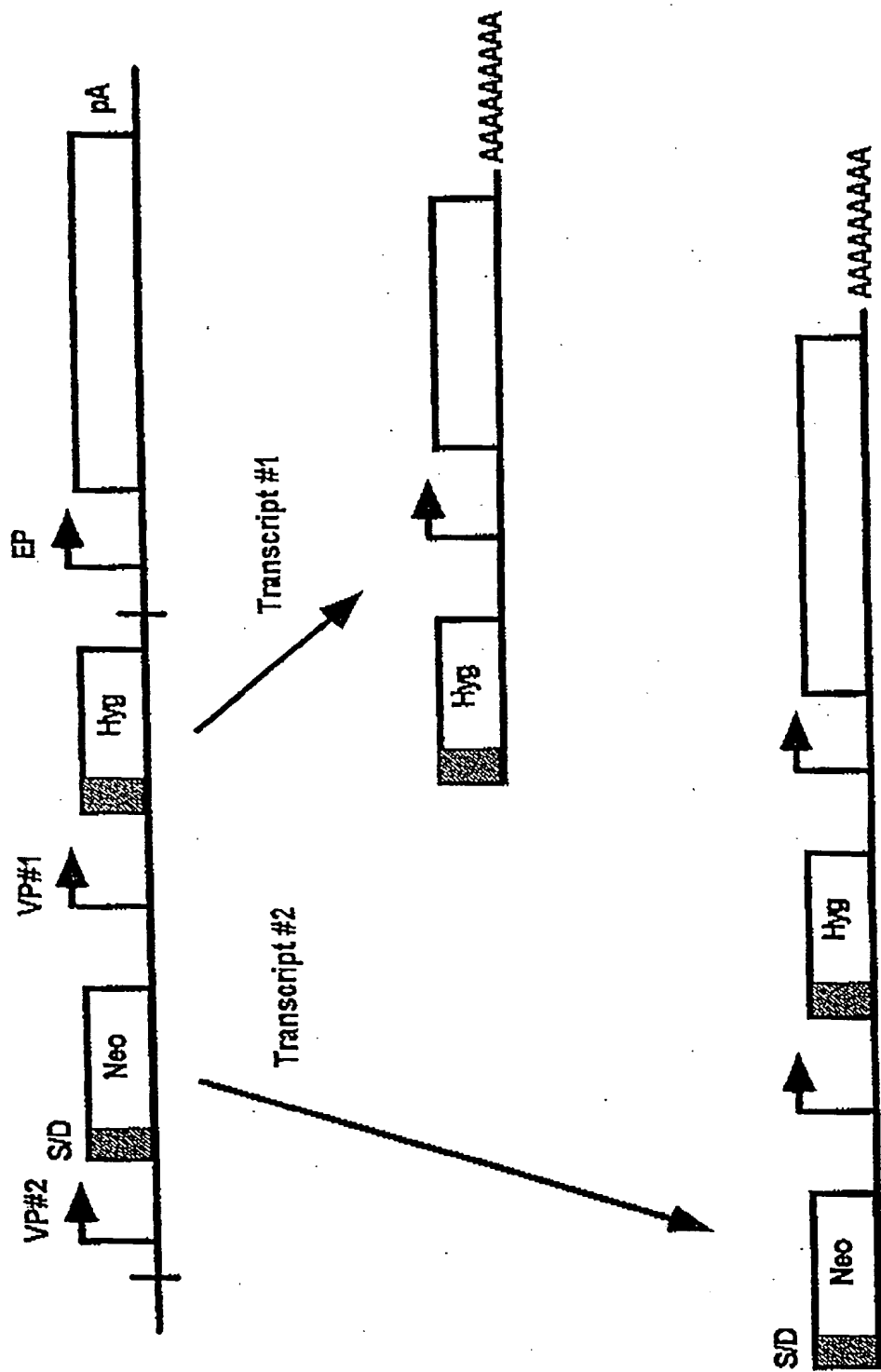


Figure 20B

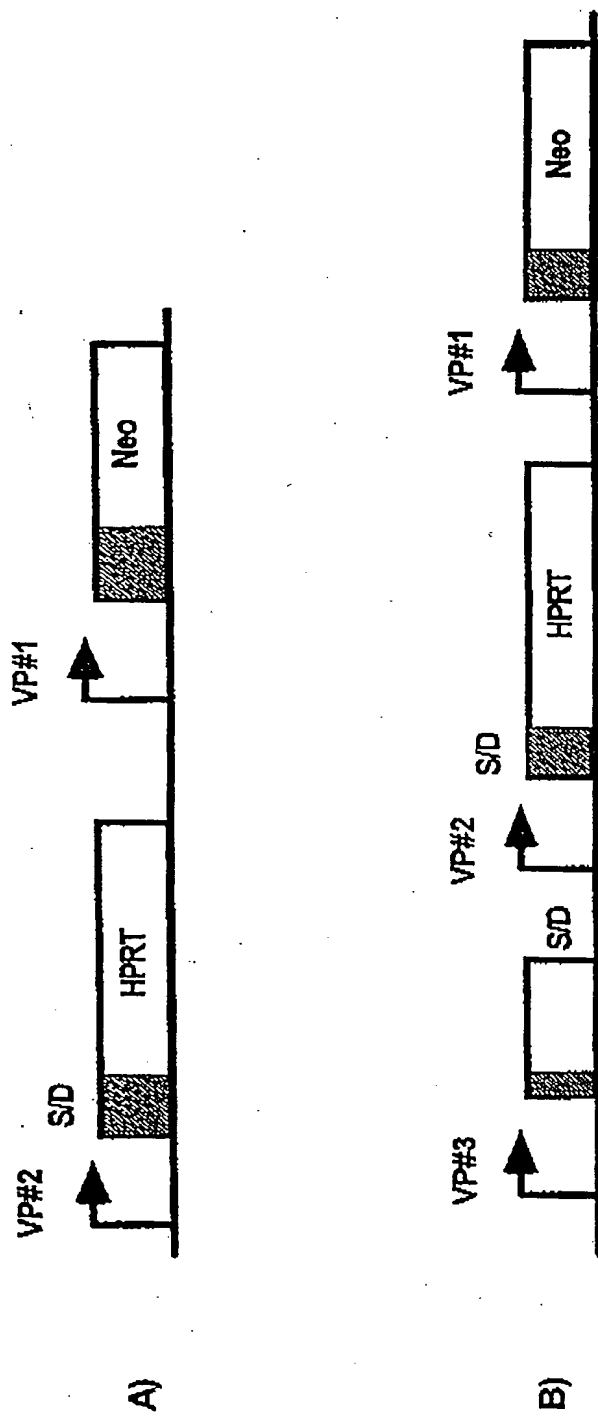


Figure 21

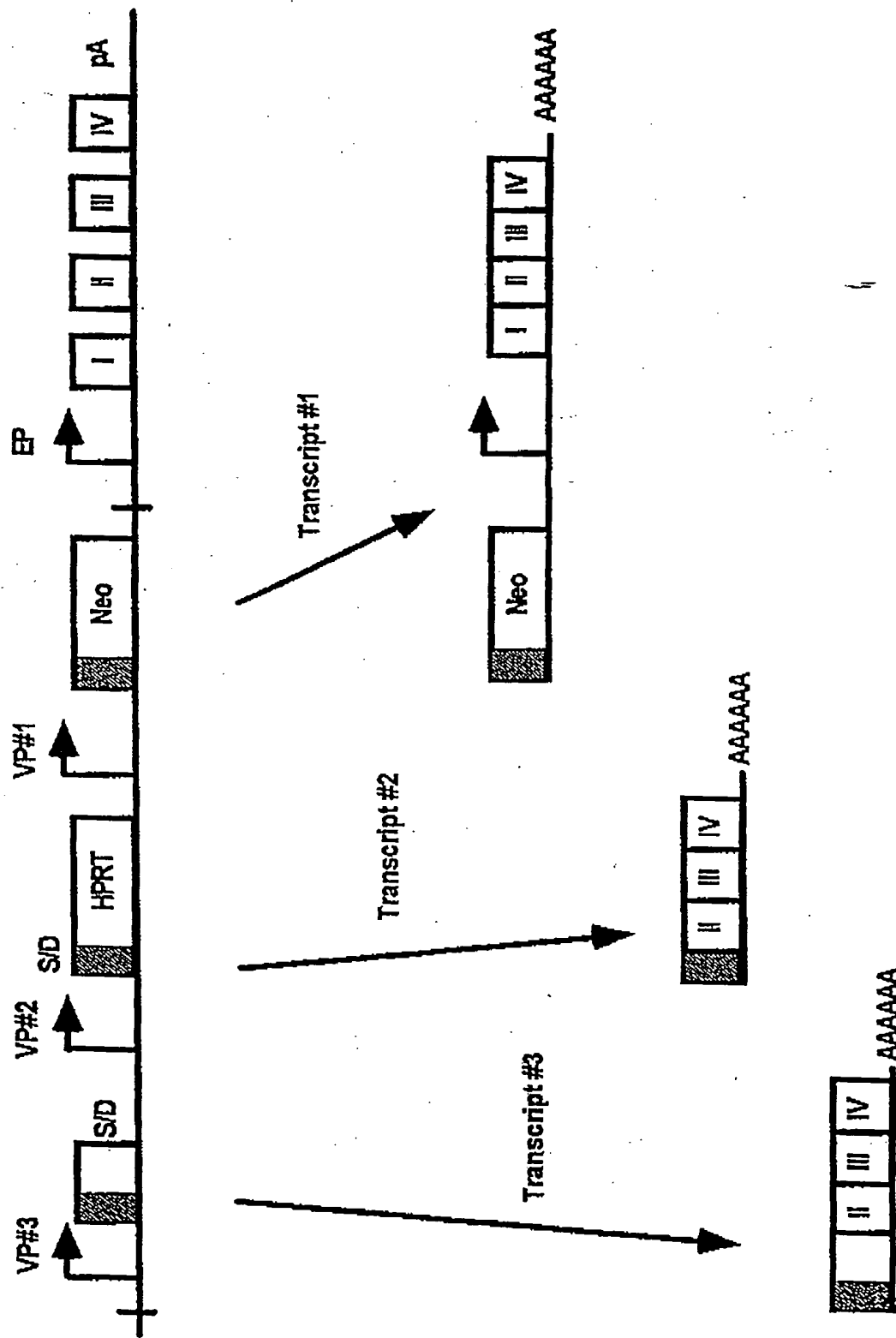


Figure 22

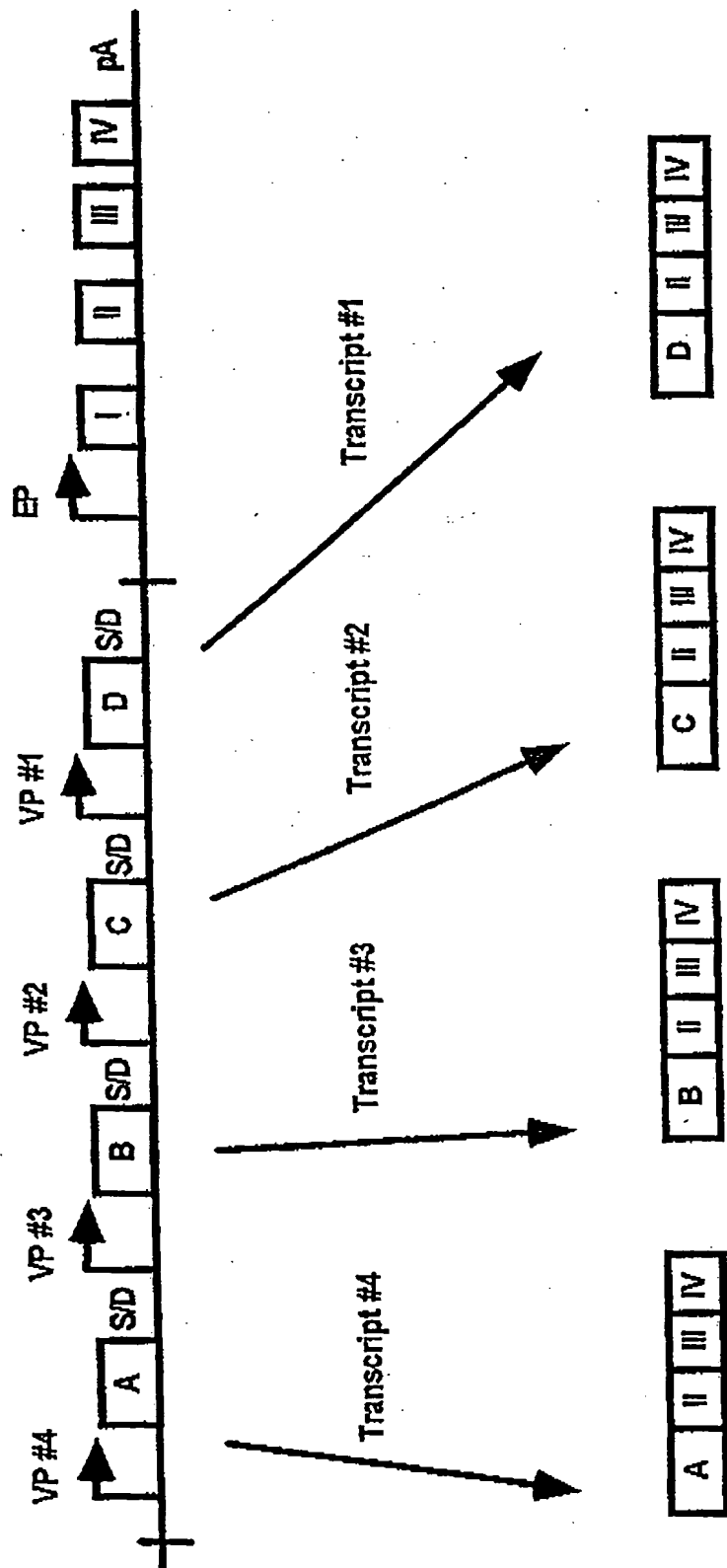


Figure 24

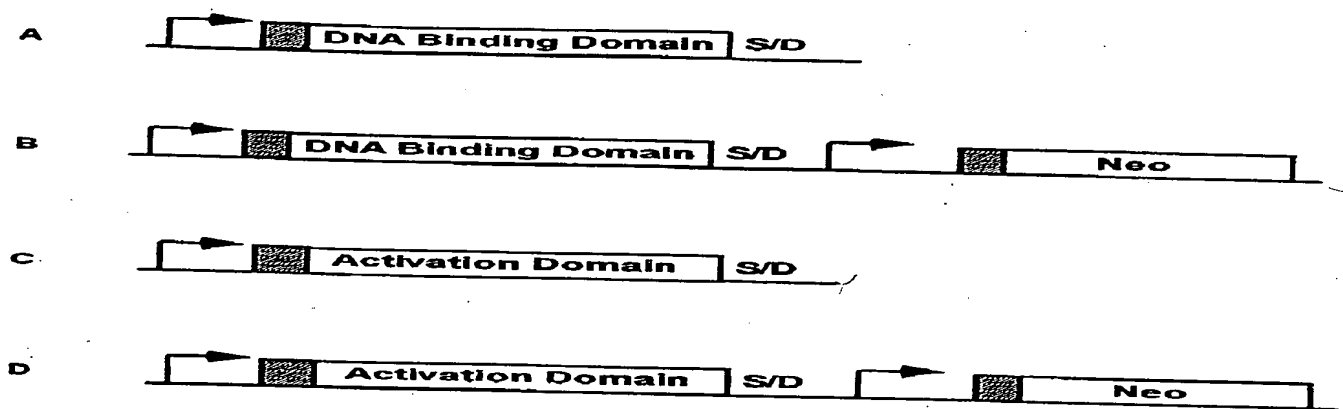
[illegible]

FIGURE 25

659220 0239260

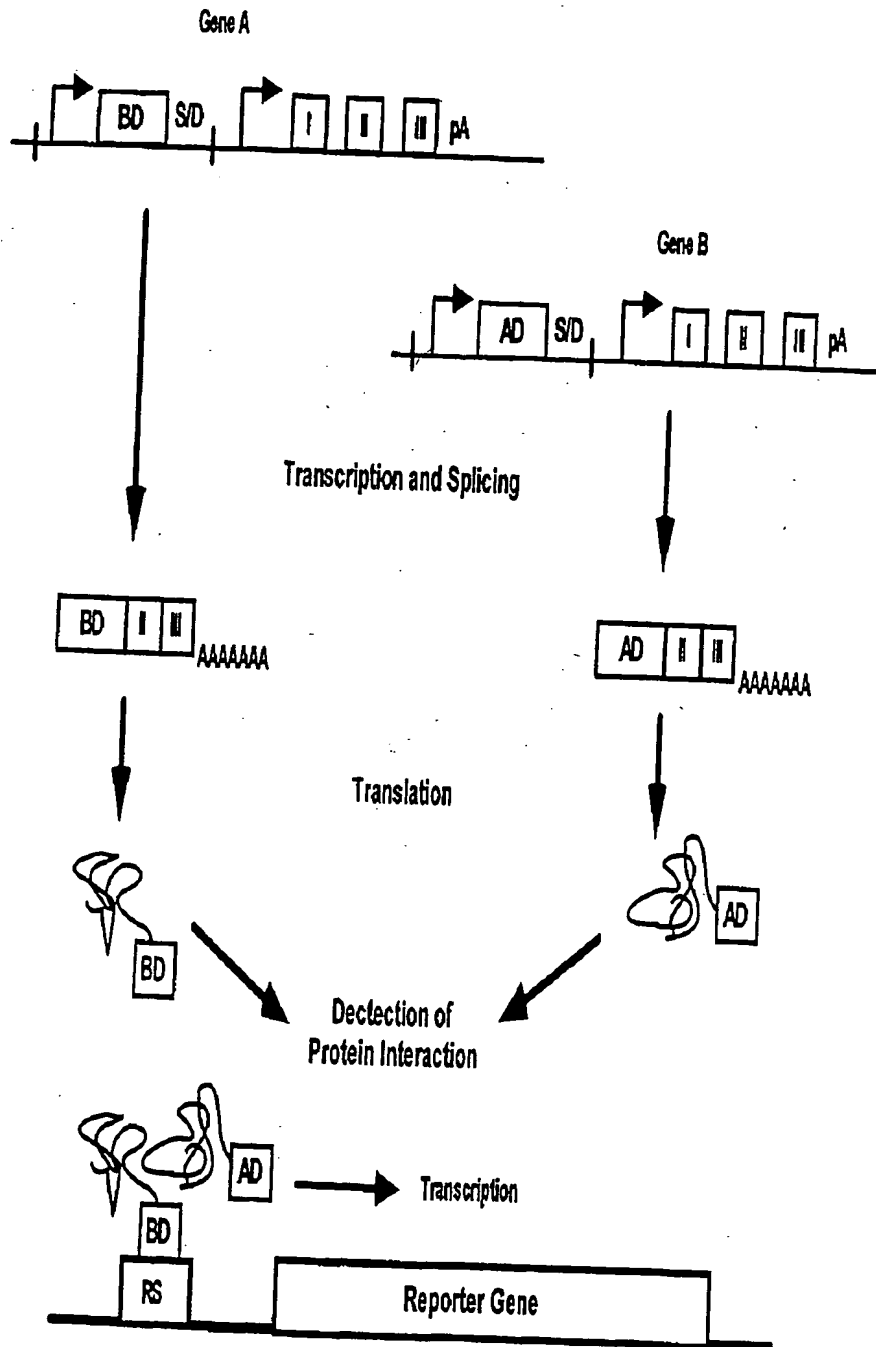


FIGURE 26

Lat.	Long.	Time	Wind	Sea	Temp.	Bar.	Remarks
23°	115°	0800	000	0	28.0	1013.2	
23°	115°	0900	000	0	28.0	1013.2	
23°	115°	1000	000	0	28.0	1013.2	
23°	115°	1100	000	0	28.0	1013.2	
23°	115°	1200	000	0	28.0	1013.2	
23°	115°	1300	000	0	28.0	1013.2	
23°	115°	1400	000	0	28.0	1013.2	
23°	115°	1500	000	0	28.0	1013.2	
23°	115°	1600	000	0	28.0	1013.2	
23°	115°	1700	000	0	28.0	1013.2	
23°	115°	1800	000	0	28.0	1013.2	
23°	115°	1900	000	0	28.0	1013.2	
23°	115°	2000	000	0	28.0	1013.2	
23°	115°	2100	000	0	28.0	1013.2	
23°	115°	2200	000	0	28.0	1013.2	
23°	115°	2300	000	0	28.0	1013.2	
23°	115°	2400	000	0	28.0	1013.2	
23°	115°	2500	000	0	28.0	1013.2	
23°	115°	2600	000	0	28.0	1013.2	
23°	115°	2700	000	0	28.0	1013.2	
23°	115°	2800	000	0	28.0	1013.2	
23°	115°	2900	000	0	28.0	1013.2	
23°	115°	3000	000	0	28.0	1013.2	
23°	115°	3100	000	0	28.0	1013.2	
23°	115°	3200	000	0	28.0	1013.2	
23°	115°	3300	000	0	28.0	1013.2	
23°	115°	3400	000	0	28.0	1013.2	
23°	115°	3500	000	0	28.0	1013.2	
23°	115°	3600	000	0	28.0	1013.2	
23°	115°	3700	000	0	28.0	1013.2	
23°	115°	3800	000	0	28.0	1013.2	
23°	115°	3900	000	0	28.0	1013.2	
23°	115°	4000	000	0	28.0	1013.2	
23°	115°	4100	000	0	28.0	1013.2	
23°	115°	4200	000	0	28.0	1013.2	
23°	115°	4300	000	0	28.0	1013.2	
23°	115°	4400	000	0	28.0	1013.2	
23°	115°	4500	000	0	28.0	1013.2	
23°	115°	4600	000	0	28.0	1013.2	
23°	115°	4700	000	0	28.0	1013.2	
23°	115°	4800	000	0	28.0	1013.2	
23°	115°	4900	000	0	28.0	1013.2	
23°	115°	5000	000	0	28.0	1013.2	
23°	115°	5100	000	0	28.0	1013.2	
23°	115°	5200	000	0	28.0	1013.2	
23°	115°	5300	000	0	28.0	1013.2	
23°	115°	5400	000	0	28.0	1013.2	
23°	115°	5500	000	0	28.0	1013.2	
23°	115°	5600	000	0	28.0	1013.2	
23°	115°	5700	000	0	28.0	1013.2	
23°	115°	5800	000	0	28.0	1013.2</	

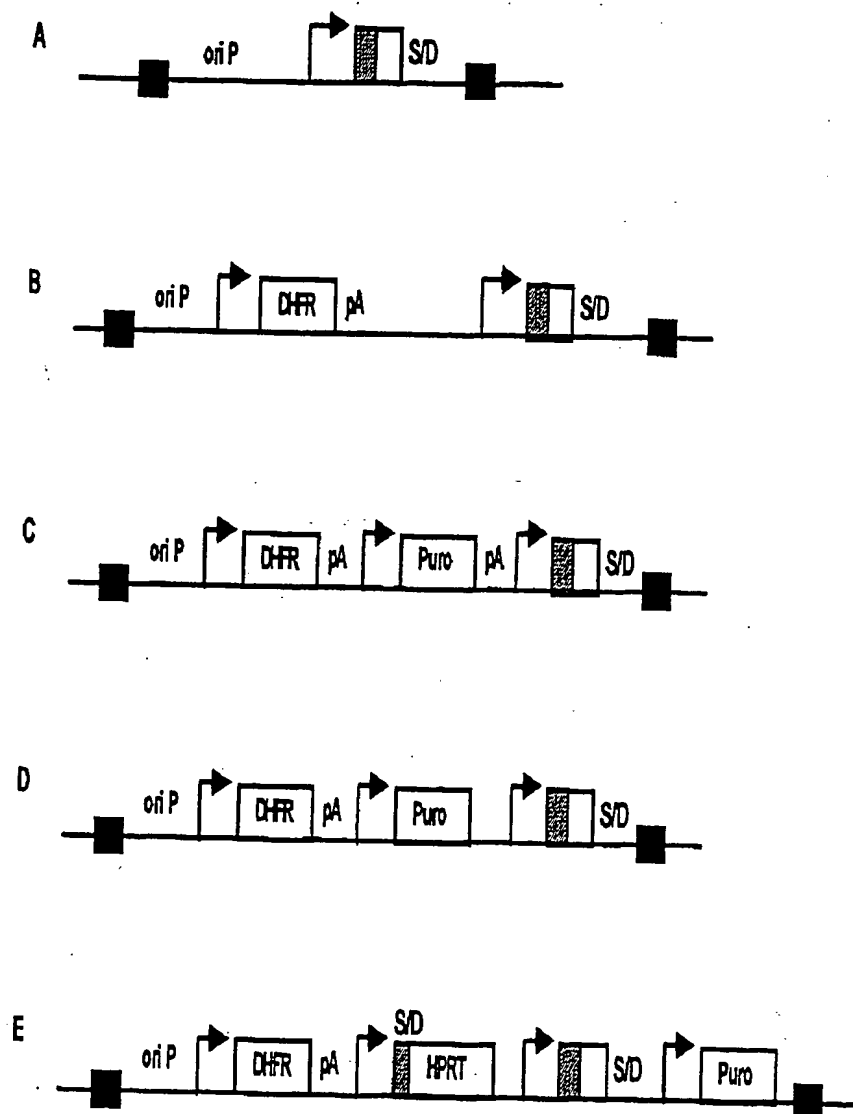


FIGURE 27

The diagram illustrates the Gateway cloning strategy. It begins with a circular BAC Vector and a linear DNA fragment containing a specific sequence (S/D) and a transcription start site (indicated by an arrow). The process involves Transposase-mediated integration, resulting in a circular intermediate vector that contains both the BAC Vector and the S/D fragment. This intermediate is then Transfected into a cell for an Assay for Protein Expression or to Recover Vector Tagged Transcripts.

FIGURE 28

CACCTAAATTGTAAGCGTTAATATTTTGTAAATTCGCGTTAAATTTTGT
TAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTAT
AAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAA
CAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGGCGAAAAA
CCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCTAATCAAGTT
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CCCCGATTTAGAGCTTGACGGGGAAAGCCGGCGAACGTGGCGAGAAAGGA
AGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCG
GTCACGCTGCGCGTAACCACCACACCCGCCGCGCTTAATGCGCCGCTACAG
GGCGCGTCCCATTTCGCCATTACAGGCTGCGCAACTGTTGGGAAGGGCGATC
GGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAAGGGGGATGTGCTG
CAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTA
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ATCGCTATTACCATGGTGTATGCGGTTTTTGGCAGTACACCAATGGGCGTGGA
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CCATCGGTGATGTGCGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCC-

FIGURE 29A

GGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTG
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AGGACTGGGCGGCGGCCAAAGCGGTCCGACAGTGCTCCGAGAACGGGTGC
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TTCGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTA
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CCTGGGGTGCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCAC
TGCCCGCTTTCCAGTCGGGAAACCTGTGCTGCCAGCTGCATTAATGAATCG
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Figure 29B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
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ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
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ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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Figure 30A

agccccgtcctacctgcaatatcaggggtgactgtgtgcagctttgacgatggagtagattgcctccctggttccacctatg
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AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 30B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGACCG
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ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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Figure 31A

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AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA
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CTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCG
CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTGCTCGCT
CCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCT
TATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGC
CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC
GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG
GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG
AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 31B

TTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT
CAGGAAATTGTAAGCGTTAATAATTGAGAAGAACTCGTCAAGAAGGCGAT
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AACGCTATGTCCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
AATCCAGAAAAGCGGCCATTTTCCACCATGATATTCGGCAAGCAGGCATCG
CCATGGGTACGACGAGATCCTCGCCGTCGGGCATGCTCGCCTTGAGCCTG
GCGAACAGTTCGGCTGGCGCGAGCCCTGATGCTCTTCGTCCAGATCATCC
TGATCGACAAGACCGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGT
TTCGCTTGGTGGTTCGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCG
CCGCATTGCATCAGCCATGATGGATACTTTCTCGGCAGGAGCAAGGTGAG
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GACAGGTTCGGTCTTGACAAAAAGAACCGGGCGCCCCTGCGCTGACAGCCG
GAACACGGCGGCATCAGAGCAGCCGATTGTCTGTTGTGCCAGTCATAGCC
GAATAGCCTCTCCACCCAAGCGGCCGGAGAACCTGCGTGCAATCCATCTTG
TTCAATCATGCGAAACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCC
CCTGCGCCATCAGATCCTTGGCGGCGAGAAAGCCATCCAGTTTACTTTGCA
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TTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTT
GTTAAAATTTCGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAG
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 31C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCGCGGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGACCG
CCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGGACTTTCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCCGCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
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GTTTGACTCACGGGGATTTCGAAGTCTCCACCCCATGACGTCAATGGGAG
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GGTCTATATAAGCAGAGCTCGTTTTAGTGAACCGTCAGATCACTGAATTCTG
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GAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCGCATGCCGACGCGCT
AGACGATTTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGGCCGG
GATTTACCCCCCAGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACT
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GGGAATTCAGGTGAGTACTCGCTACCTTAAGgcctatctggccgtttaaacagatgtgtataag
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Figure 32A

atggaggtagtaagacctccctttacaacctaaggcgaggaactgcccttgctattccacaatgtcgtcttacaccattgagt
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 ttacaaactcatatatttgcgtgaggtttgaaggatgcgattaaggaccttggtatgacaaagcccgtcctacctgcaatatac
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 GTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGACTGGGCGGCGGCCAA
 AGCGGTTCGGACAGTGCTCCGAGAACGGGTGCGCATAGAAATTGCATCAAC
 GCATATAGCGCTAGATCCTTGCTAGAGTCGAGATCTGTCGAGCCATGTGAG
 CAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCG
 TTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCA
 AGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCC
 CCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGTTACCGG
 ATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCA
 CGCTGTAGGTATCTCAGTTCGGTGTAGGTTCGTTCCGCTCCAAGCTGGGCTGT
 GTGCACGAACCCCCCGTTTCAGCCCCGACCGCTGCGCCTTATCCGGTAACAT
 CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCC
 ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT-

FIGURE 32B

TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAAGGACAGTATTTGGTA
TCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTT
GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGC
AGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT
CTACGGGGTCTGACGCTCAGTGGAACGAAACTCACGTAAAGGGATTTTG
GTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTATCGGTGTGA
AATACCGCACAGATGCGTAAGGAGAAAAATACCGCATCAGGAAATTGTAAG
CGTTAATAATTGAGAAGAACTCGTCAAGAAGGCGATAGAAGGCGATGCGC
TGCGAATCGGGAGCGGCGATACCGTAAAGCACGAGGAAGCGGTGAGCCCA
TTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCCAACGCTATGTCCTG
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CGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGTTTCGCTTGGTGGT
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AACGTCGAGCACAGCTGCGCAAGGAACGCCCGTCGTGGCCAGCCACGATA
GCCGCGCTGCCTCGTCTTGCAGTTCATTAGGGCACCGGACAGGTCGGTCT
TGACAAAAAGAACCAGGGCGCCCCTGCGCTGACAGCCGGAACACGGCGGCA
TCAGAGCAGCCGATTGTCTGTTGTGCCAGTCATAGCCGAATAGCCTCTCC
ACCCAAGCGGCCCGGAGAACCTGCGTGCAATCCATCTTGTTCAATCATGCGA
AACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCCCCTGCGCCATCAG
ATCCTTGGCGGCGAGAAAGCCATCCAGTTTACTTTGCAGGGGCTTGTC AAC
TTACCAGATAAAAGTGCTCATCATTGGAAAAcattcaattcgctgacctcgaaattctaccggg
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GACTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCTGGGGAGCCTGGG
GACTTTCCACACCCTAACTGACACACATTCCACAGCTGGTTCTTTCCGCCTC
AGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTAAATTCGCG
TTAAATTTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGC
AAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTT
CCAGTTTGGAAACAAGAGTCCACTATTAAGAACGTGGACTCCAACGTCAA
GGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 32C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
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GTTTGACTCACGGGGATTTCGAAGTCTCCACCCCATGACGTCAATGGGAG
TTTGTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTG
CGATCGCCCCGCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA
GGTCTATATAAGCAGAGCTCGTTTTAGTGAACCGTCAGATCACTGAATTCTG
ACGACCTACTGATTAACGGCCAGATCTAAGCTAGCTTCCTGAAAGATGAAG
CTACTGTCTTCTATCGAACAAGCATGCGATATTTGCCGACTTAAAAAGCTC
AAGTGCTCCAAAGAAAAACCGAAGTGCGCCAAGTGTCTGAAGAACAACCTG
GGAGTGTGCTACTCTCCCAAACCAAAAGGTCTCCGCTGACTAGGGCACA
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GATTTTTCTCTCGAGAAGACCTTGACATGATTTTGAAAATGGATTCTTTACA
GGATATAAAAGCATTGTTAACAGGATTATTTGTACAAGATAATGTGAATAA
AGATGCCGTCACAGATAGATTGGCTTCAGTGGAGACTGATATGCCTCTAAC
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FIGURE 33A

09276820 033604

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TGCTAGAGTCGAGATCTGTCTGAGCCATGTGAGCAAAAGGCCAGCAAAAGG
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CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC
CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTG
CGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCC
CTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGT-

FIGURE 33B

TCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTT
CAGCCCGACCGCTGCGCCTTATCCGGTAACCTATCGTCTTGAGTCCAACCCG
GTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAG
CAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTA
ACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGC
CAGTTACCTTCGGA AAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA
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GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGAC
ACACATTCCACAGCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATT
GTAAGCGTTAATATTTTGTAAATTCGCGTTAATTTTTGTAAATCAGC-

Figure 33C

TCATTTTTTAACCAATAGGCCGAAATCGGC AAAATCCCTTATAAAATCAAAA
GAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCC
ACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATC
AGGGCGATGGCCCAC

FIGURE 33D

tcaacgacaggagcacgatcatgcgacccgtggccaggaccaacgctgcccagatgcgccgctgaggctgctgg
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FIGURE 34B

09275820 033409

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CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
ATTACCATGGTGATGCGGTTTTTGGCAGTACACCAATGGGCGTGGATAGCG
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ATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTGTGGT
CGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGA
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FIGURE 35A

66920 0289260

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CATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTTCTCCGCCCATGGCTG
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GCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGC
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CCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGT
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TGTTCCGACGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTG
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AGTTTGGAACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAG
GGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 35B

1. *Chrysomelidae* (10 species)

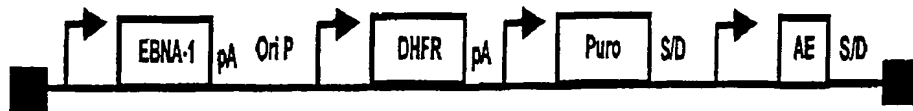


FIGURE 36

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ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGACCG
CCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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ATTGACGTCAATGACGGTAAATGGCCCCGCTGGCATTATGCCCAGTACATG
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GGTCTATATAAGCAGAGCTCGTTTGTAGTGAACCGTCAGATCACTGAATTCTG
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FIGURE 37A

agcccgtcctacctgcaatatcaggggtgactgtgtgcagctttgacgatggagtagattgcctccctggttccacctatg
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GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG
GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG
AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 37B

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GGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACAGCTGG
TTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTT
GTAAAATTTCGCGTTAAATTTTTGTAAATCAGCTCATTTTTTAACCAATAG
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

Figure 37C